

**COMMONWEALTH OF VIRGINIA  
STATE IMPLEMENTATION PLAN REVISION  
FOR  
PHASE II OF THE NO<sub>x</sub> SIP CALL**

**STATE OPERATING PERMIT  
FOR  
TRANSCONTINENTAL GAS PIPE LINE CORPORATION  
STATION 175**

On October 27, 1998, the U.S. Environmental Protection Agency (EPA) published a final rule, "Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone" (63 FR 57355). This rule, commonly referred to as the NO<sub>x</sub> SIP Call, required Virginia and certain other states to reduce the summertime emissions of nitrogen oxides (NO<sub>x</sub>), which is one of the precursors of ozone pollution, and to submit a revision to their State Implementation Plans (SIPs) that identified measures necessary to achieve these reductions.

EPA was subsequently challenged through the courts on the NO<sub>x</sub> SIP Call rule. On March 3, 2000, the DC Circuit Court issued a decision that largely favored EPA while ruling against them on several issues. One of the issues for which the court ruled against EPA involved the failure to provide adequate notice of the change in control level assumed for large stationary internal combustion (IC) engines. The stay was lifted for the issues for which the court ruled in EPA's favor. Subsequently, the State Air Pollution Control Board promulgated a regulation to comply with the requirements of the NO<sub>x</sub> SIP Call. The Department of Environmental Quality (DEQ) then submitted this regulation to EPA as a SIP revision on June 25, 2002. EPA approved this revision July 8, 2003 (68 FR 40520). This action is referred to as the Phase I NO<sub>x</sub> SIP Call, and addresses only those requirements for which the stay was lifted.

In response to the remaining issues resulting from the court decision, EPA published a final rule on April 21, 2004 (69 FR 21603). This rule, "Interstate Ozone Transport: Response to Court Decisions on the NO<sub>x</sub> SIP Call, NO<sub>x</sub> SIP Call Technical Amendments, and § 126 Rules," is commonly referred to as Phase II of the NO<sub>x</sub> SIP Call. It addresses the remaining requirements not included in Phase I of the NO<sub>x</sub> SIP Call. One of the actions of this rule is to set the control levels for large stationary IC engines.

EPA's Phase II NO<sub>x</sub> SIP Call rule targeted emission reductions from large IC engines, which are those that had an average NO<sub>x</sub> emission of one ton per day or more during the 1995 ozone season. EPA then reviewed the IC engine inventory in order to develop a database that identifies affected sources and the emissions reductions these sources need to achieve. EPA posted this information on a web page entitled "NO<sub>x</sub> SIP Call: emission inventory for stationary internal combustion engines: March 2, 2000," which is located at <http://www.epa.gov/ttn/oarpg/new.html>.

In Virginia, it was determined that one company owns all of the potentially affected sources

in the state: Transcontinental Gas Pipe Line Corporation (Transco), an interstate natural gas transmission system. Transco operates six stations in Virginia, four of which are subject to the IC engine portion of the Phase II NO<sub>x</sub> SIP Call. These four stations are located in the South Central, Valley, and Northern Administrative Regions, and are listed below:

Station Number	Location	Registration Number
Station 165	Chatham, VA (Pittsylvania County)	30864
Station 170	Appomattox, VA (Appomattox County)	30863
Station 175	Scottsville, VA (Fluvanna County)	40789
Station 180	Unionville, VA (Orange County)	40782

The total required reduction of NO<sub>x</sub> from the affected stations is 3,343 tons from 17 engines, assuming a .98 growth factor and an 82% NO<sub>x</sub> reduction. This differs from the 6,168 tons shown as the Phase II incremental reduction in 40 CFR 51.121(e)(3); however, EPA checked and identified 17 large engines projected to emit 4,077 tons in 2007 and verified that an 82% reduction equates to 3,343 tons. Communications between DEQ and EPA acknowledge that the NO<sub>x</sub> emission reductions required as published is an error, and that the reductions required is 3,343 tons per ozone season.

EPA requires that Virginia confirm that the identified ICs are those that would be required to control by 82%. It also requires that, in the demonstration, the inventory is referenced in order to show that Virginia is meeting all Phase II requirements. The final EPA rule also speaks to revisions of budget numbers, and corrections made during the rulemaking process, which allow correction of the final numbers to be made in the SIPs approvals which take action on the state rules. Emissions correlated to the needed reductions as determined by Virginia and verified by EPA are shown below:

Station Information		1995 NO <sub>x</sub> Emissions	2007 Ozone Season NO <sub>x</sub> Emissions				
<i>Station No.</i>	<i>Location</i>	Ozone Season tons per season	<i>EPA Growth Factor</i>	Total NO <sub>x</sub> tons	Targeted Reduction %	Targeted NO <sub>x</sub> Changes tons	Allowable Total NO <sub>x</sub> tons
165	Pittsylvania County	201.8223	0.98	197.7859	82%	(162.1844)	35.6015
170	Appomattox County	2691.7290	0.98	2,637.8944	82%	(2,163.0734)	474.8210
175	Fluvanna County	1107.8730	0.98	1,085.7155	82%	(890.2867)	195.4288
180	Orange County	158.6610	0.98	155.4878	82%	(127.5000)	27.9878
<b>Totals for All Units Subject to Rule</b>		<b>4160.0853</b>		<b>4076.883594</b>		<b>(3,343.0445)</b>	<b>733.8390</b>

The Transco Station 175 located in Fluvanna County, Virginia has been identified as a source subject to the IC engine portion of the Phase II NO<sub>x</sub> SIP Call requirements. A legally enforceable mechanism (federally enforceable state operating permit) has been drafted to ensure compliance with the Phase II NO<sub>x</sub> SIP Call requirements and is included as Attachment A. Attachment B presents the statement of basis to support the terms and conditions of the permit.

DEQ is proposing to revise the SIP to incorporate the permit it issued to Transco Station 175. This action will meet the state's obligations under the Phase II of the NO<sub>x</sub> SIP Call. Attachment C consists of a demonstration and analysis that shows how the affected units specified in the permit (Attachment A) will achieve the specific Phase II NO<sub>x</sub> SIP Call emission reduction requirements. Finally, Attachment D consists of a compliance plan that demonstrates how the affected unit will perform additional measures in order to address load shifting and thus assure compliance with the necessary emissions reductions.

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**LEGALLY ENFORCEABLE MECHANISM (PERMIT)  
TO ENSURE COMPLIANCE WITH  
PHASE II NO<sub>x</sub> SIP CALL REQUIREMENTS  
FOR**

Transcontinental Gas Pipe Line Corporation  
Station 175  
Fluvanna County, Virginia  
Registration No. 40789

Under the authority provided in 9 VAC 5-170-180 and Section IV B 2 of Agency Policy Statement No. 2-2003 (dated June 20, 2003), the Director of the Valley Regional Office approved and issued the permit on #[pending date], to be effective that same day. The permit was approved and issued following the procedural requirements of Virginia's federally enforceable state operating permit program, Article 5 (9 VAC 5-80-800 et seq.) of Part II of 9 VAC 5 Chapter 80.

REMOVE THIS PAGE AND INSERT COPY OF PERMIT

EPA REQUIREMENTS: When submitting a permit, plan approval or consent agreement/order to be approved as a source-specific SIP revision, be certain that it has no expiration date. EPA cannot SIP approve a document with an expiration date. You may issue them to sources with an expiration date, but must remove the expiration date if you submit the permit, plan approval or consent agreement/ order as a SIP revision or as part of a 111(d)/129 plan.

**STATEMENT OF BASIS FOR  
DETERMINATION OF CONTROL OF NO<sub>x</sub> EMISSIONS  
FROM**

Transcontinental Gas Pipe Line Corporation  
Station 175  
Fluvanna County, Virginia  
Registration No. 40789

## REMOVE THIS PAGE AND INSERT COPY OF STATEMENT OF BASIS

EPA REQUIREMENTS: When submitting a permit, plan approval or consent agreement/order as a source-specific SIP revision imposing emission reduction requirements under a SIP-approved generic rule, you must include a document generated by your agency in which your agency evaluates the source's emissions reduction plan against all of the requirements of your approved generic rule. In this document, your agency must determine and conclude what the appropriate emission reduction requirements are for each applicable emission unit. The form of this document can be a memorandum from a staff project officer/engineer to the file or to his/her supervisor. A source-specific SIP revision is incomplete that only includes the source's (company's) proposal and the permit, plan approval or consent agreement/order. That said, the company's proposal/plan must also be included in the state submittal and may not be simply cited or referenced.

**EQUIVALENCY DEMONSTRATION  
FOR CONTROL OF NO<sub>x</sub> EMISSIONS  
FROM**

Transcontinental Gas Pipe Line Corporation  
Station 175  
Fluvanna County, Virginia  
Registration No. 40789

The following document demonstrates how the affected unit specified in the permit (Attachment A) will achieve an emissions reduction equivalent to the specific Phase II NO<sub>x</sub> SIP Call emission reduction requirement. This demonstration and analysis includes identification of affected units, the reductions required of each unit, and how the reductions equate to the emissions rate standard in pounds per hour included in the permit.

REMOVE THIS PAGE AND INSERT COPY OF EQUIVALENCY DEMONSTRATION

**COMPLIANCE PLAN  
FOR CONTROL OF NO<sub>x</sub> EMISSIONS  
FROM**

Transcontinental Gas Pipe Line Corporation  
Station 175  
Fluvanna County, Virginia  
Registration No. 40789

The following document demonstrates how the affected unit specified in the permit (Attachment A) will comply with achieve an emissions reduction equivalent to the specific Phase II NO<sub>x</sub> SIP Call emission reduction requirement. This plan contains limits on the hours of operation as well as additional recording requirements that are designed to address any potential issues with respect to load shifting.

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